



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

4/1

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,915	09/07/2000	Larry I. Benowitz	CMZ-129	2385
7590	11/23/2004		EXAMINER	
DAVID S. RESNICK NIXON PEABODY, LLP 100 Summer Street BOSTON, MA 02110			NICHOLS, CHRISTOPHER J	
			ART UNIT	PAPER NUMBER
			1647	
			DATE MAILED: 11/23/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/656,915	BENOWITZ, LARRY I.
	<b>Examiner</b>	<b>Art Unit</b>
	Christopher J Nichols, Ph.D.	1647

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 August 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 31-34,36,37 and 58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 31,32 and 58 is/are rejected.
- 7) Claim(s) 33,34,36 and 37 is/are objected to.
- 8) Claim(s) 31-34,36,37 and 58 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 August 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12.27.02 1.11.01</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Status of Application, Amendments, and/or Claims***

1. The Response and Amendment filed 19 August 2004 has been received and entered in full.
2. The Preliminary Amendment filed 5 November 2001 has been received and entered in full.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Withdrawn Objections And/Or Rejections***

4. The Objection to the Specification under sequence rules as set forth at pp. 2 ¶2 in the previous Office Action (20 April 2004) is hereby *withdrawn* in view of Applicant's amendments (19 August 2004).
5. The Objection to claim 35 as set forth at pp. 2 ¶3 in the previous Office Action (20 April 2004) is *moot* in view of Applicant's cancellation of said claim (19 August 2004).
6. The Rejection of claims 30, 35, and 38 as set forth in the previous Office Action (20 April 2004) is *moot* in view of Applicant's cancellation of said claims (19 August 2004).
7. The Rejection of claims 31-34 and 36-37 under 35 U.S.C. §112 ¶1 and ¶2 as set forth in the previous Office Action (20 April 2004) is *withdrawn* in view of Applicant's amendments (19 August 2004).

### ***New Objections And/Or Rejections***

***Claim Objections***

8. Claims **33** and **34** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claims **36** and **37** are objected to because of the following informalities: said claims depend off claim 30, a cancelled claim. Claims have not been further treated on their merits. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

10. Claim **32** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 32 recites the limitation “human” in the first line. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims **31**, **32**, and **58** is rejected under 35 U.S.C. 102(a) as being anticipated by Zhou *et al.* (28 January 2000) “Identification of a human brain-specific isoform of mammalian STE20-

like kinase 3 that is regulated by cAMP-dependent protein kinase.” J Biol Chem. **275**(4): 2513-9 (IDS #B11).

12. Zhou *et al.* teaches a method of measuring phosphorylation of endogenous p42/44 MAPK by MST3b in an HEK293 cell model in the presence and absence of activators such as PKA and inhibitors such as H89 thus meeting the limitations of claim 58 (Figures 4-5). MST3b is a human protein cloned and recombinantly expressed in HEK293 cells thus meeting the limitations of claims 31 and 32 (Figure 1). The Examiner notes that the Specification teaches that the Human Brain-specific Isoform of Mammalian STE30-like Kinase 3 (MST3b) is in fact an N-kinase (instant Specification pp. 6 lines 19-27).

13. Claim 58 is rejected under 35 U.S.C. 102(b) as being anticipated by Adler *et al.* (September 1996) “Effects of chemopreventive selenium compounds on Jun N-kinase activities.” Carcinogenesis **17**(9): 1849-54.

14. Adlert *et al.* teaches the an assay method where the effects of organoselenium chemopreventive agent 1,4-phenylenebis(methylene)selenocyanate (p-XSC) on Jun-N-kinase (JNK) phosphorylation of the peptide RRRELVEPLTPSGE in a mouse fibroblasts as a model cell system thus meeting the limitations of claim 58 (Abstract; Figure 4).

15. Claim 58 is rejected under 35 U.S.C. 102(b) as being anticipated by Rowland-Gagne & Greene (February 1990) “Multiple pathways of N-kinase activation in PC12 cells.” J Neurochem. **54**(2): 423-33.

16. Rowland-Gagne & Greene teach an *in vitro* method of measuring phosphorylation of substrates in the presence of NGF, EGF, FGF, TPA, dbcAMP, and KCl by N-kinase thus meeting the limitations of claim 58 (Table 1).

***Summary***

17. No Claims are allowed.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

19. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Christopher James Nichols, Ph.D.** whose telephone number is **(571) 272-0889**. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Brenda Brumback** can be reached on **(571) 272-0961**.

The fax number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

CJN  
November 9, 2004

*Elizabeth C. Hemmings*

RECEIVED  
NOV 10 2004  
CPTM  
USPTO